Fabric Interface

Classification & Forwarding ASIC — 47

Data Path

Framer, MAC

PHY, Optics

Network Address Processor — 10

Lookup requests — 41

Lookup results — 43

Control — 45

Associated Data Engine — 30

Lookup Engine — 20

Addr — 22

Routing & Management CPU — 46

Management requests — 40

busy — 42

Management results — 44

• Management requests are typically Inserts/Deletes
• Lookup requests are typically Lookups
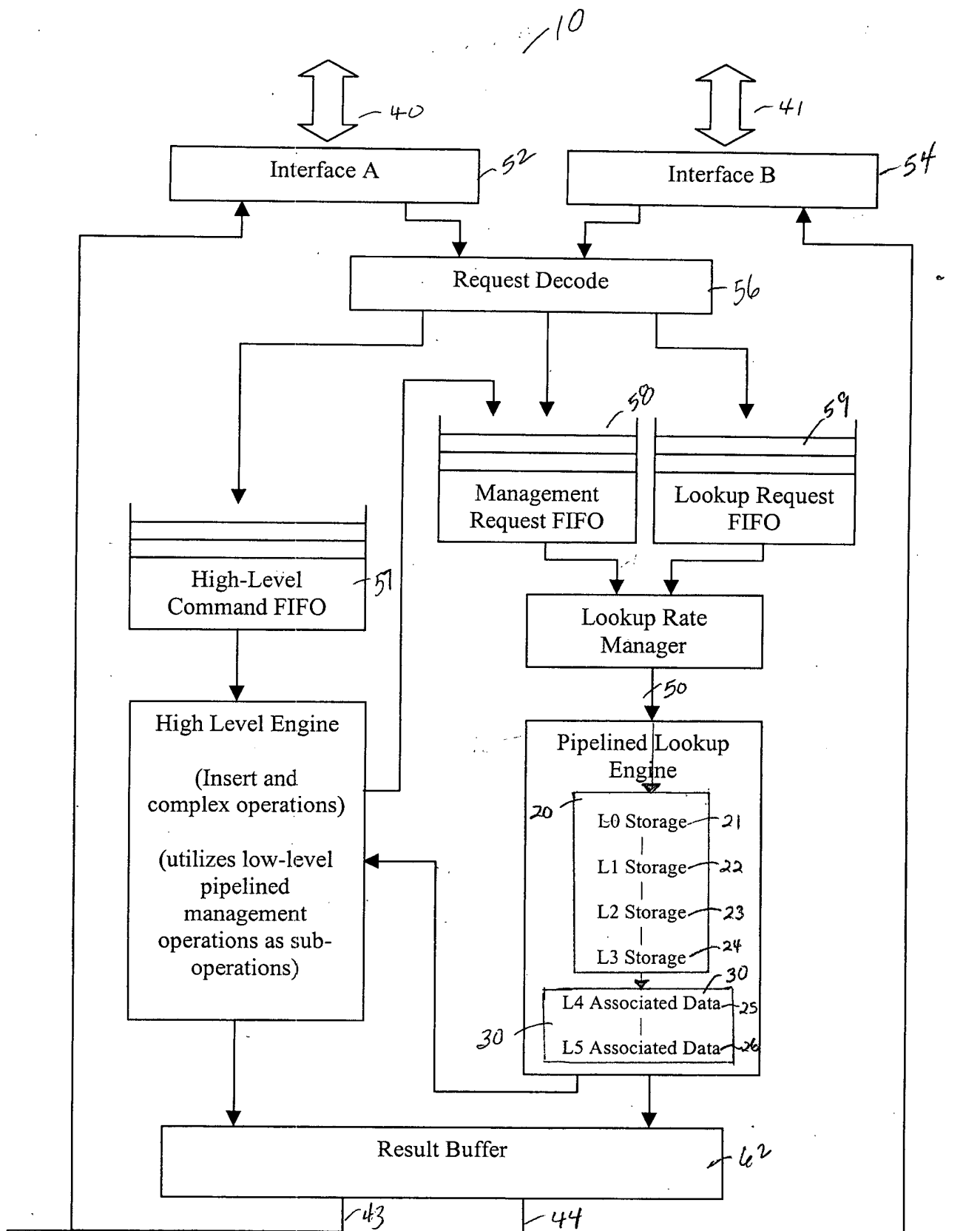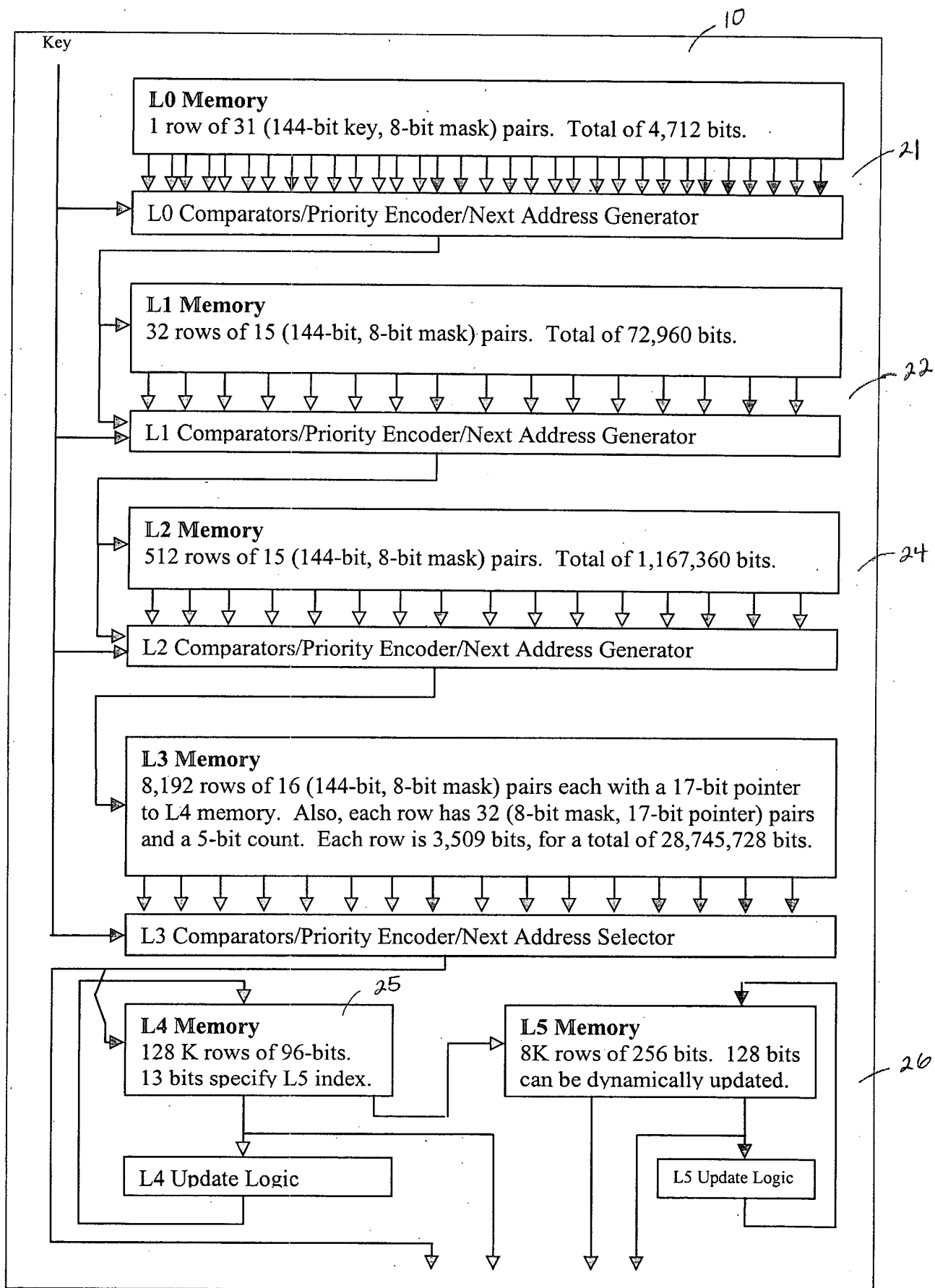• Both Interfaces can handle all request types

FIG. 1

10

40

41

Interface A — 52

Interface B — 54

Request Decode — 56

Management
Request FIFO — 58

Lookup Request
FIFO — 59

High-Level
Command FIFO — 57

Lookup Rate
Manager — 50

High Level Engine

(Insert and
complex operations)

(utilizes low-level
pipelined
management
operations as sub-
operations)

Pipelined Lookup
Engine

20

L0 Storage — 21

L1 Storage — 22

L2 Storage — 23

L3 Storage — 24

30

L4 Associated Data — 25

30

L5 Associated Data — 26

Result Buffer — 42

43   44

FIG. 2

FIG. 3 —